UNIVERSITY OF TRENTO - Italy
Department of Information Engineering
and Computer Science

Information sheet

Research study "Interactive fishing simulation with visual, auditory, and tactile feedback": information for participants

We would like to invite you to be part of this research project. You should only agree to take part if you want to. If you choose not to take part there won't be any disadvantages for you and you will hear no more about it.

Please read the following information carefully before you decide to take part; this will tell you why the research is being done and what you will be asked to do if you take part. Please ask if there is anything that is not clear or if you would like more information.

If you decide to take part you will be asked to sign the attached form to say that you agree.

You are still free to withdraw at any time and without giving a reason.

Procedure

This research involves completing the fishing simulation in a timely manner by executing correct movements of the rod and reel at appropriate moments. Participants will be immersed in a fishing environment, engaging three out of five senses: sight (a), hearing (b), and touch (c). There will be 8 tests, each composed of a combination of the mentioned senses (with a score ranging from 0, insufficient interaction, to 5, strong interaction):

- Visual, auditory, tactile (5, strong interaction)
- Visual, auditory (4, moderate-strong interaction)
- Visual, tactile (4, moderate-strong interaction)
- Auditory, tactile (2, moderate-weak interaction)

Experimentation procedure:

1. Explanation, setting and context;
2. Participants can have 1 or 2 rounds of free training with all 3 senses without measurements;
3. Explanation of auditory, visual, and haptic signals during the test;
4. Measurement begins:
    i. 2 rounds with all senses;
    ii. 2 rounds with senses (a) - (b);
    iii. 2 rounds with senses (a) - (c);
    iv. 2 rounds with senses (b) - (c);
5. Participants will agree to complete a brief qualitative questionnaire about their experience (QR code on the right side).

Consent

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form.

If you have any questions or concerns about the manner in which the study was conducted please, in the first instance, contact the researcher responsible for the study. If this is unsuccessful, or not appropriate, please contact Prof. Luca Turchet: luca.turchet@unitn.it

Consent form

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: **"Interactive fishing simulation with visual, auditory, and tactile feedback"**

- Thank you for considering taking part in this research. The person organizing the research must explain the procedure to you before you agree to take part.
- If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.
- *I understand that if I decide at any other time during the research that I no longer wish to participate in this project, I can notify the researchers involved and be withdrawn from it immediately.*
- *I consent to the processing of my personal information for the purposes of this research study. I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of The General Data Protection Regulation (EU) 2016/679 (GDPR).*

Participant's Statement:

I _____ agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Signed: _____ Date: _____

If the participant is under 18 years old, the person who acts in the participant's stand is _____

Signed: _____ Date: _____

Investigator's Statement:

I _____ confirm that I have carefully explained the nature, demands and any foreseeable risks of the proposed research to the volunteer

Signed: _____ Date: _____

Appendix:

If you are interested in understanding how your data will be processed and the anticipated perceptions/actions for the project, you can read this section.

Metrics for evaluating performance

- Time taken to catch the fish (evaluated in seconds);
- Number of victories (dimensionless);
- Score or cumulative score (dimensionless) formed by the following phases:
    - Attraction;
    - Capture;
    - Recovery;
- Reaction times when the fish bites (evaluated in milliseconds);
- Degree of wear on the line accumulated during the fish recovery phase.

Perceptions

- Attracting the fish:
    - Visual: the fish approaches, and colors become more vivid
    - Auditory: a sound feedback informs about the type of movement being made; the more curious the fish, the more captivating the music becomes
- Fish tasting the bait:
    - Visual: the fish opens and closes its mouth
    - Auditory: the sound of a bite is heard
    - Tactile: brief impulses indicating that the fish is biting the bait
- Fish biting:
    - Visual: the fish bites the hook
    - Auditory: a strong biting sound
    - Tactile: perception of a turbulent and strong pattern of vibrations
- Line tension:
    - Visual: the line turns red
    - Auditory: a sinusoidal wave is heard with a tremolo stronger or softer depending on the tension
    - Tactile: vibration increases or decreases proportionally to the tension
- End of the game:
    - Visual, Auditory, Tactile: expressive animations indicating the type of ending

Actions

- Holding the rod: between 30 and 40 degrees on the horizon;
- Long attracting: wide, gentle, and sinuous movements in the shape of an eight;
- Little attracting: small, quick, and brief movements, up and down;
- Reeling the reel: pull towards oneself to lengthen the line, opposite to shorten it.